VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the reissuance of the VPDES permit listed below. This permit is being processed as a *Minor, Municipal permit*. The effluent limitations contained in this permit will maintain the Water Quality Standards of 9VAC25-260 et. seq. The treatment facilities consist of an extended aeration package sewage treatment plant with a bar screen, flow equalization tank, grinder pumps, aerated sludge holding tank, aeration tank, secondary clarifier, tablet chlorinator/ contact tank, tablet dechlorinator, post aeration tank and facilities. This permit action consists of limiting pH, biochemical oxygen demand, total suspended solids, dissolved oxygen, E coli and total residual chlorine in Garden Creek and updating other special conditions and reporting requirements. The SIC Code for this facility is 4952.

1. Facility Name and Applicant Address:
   Consolidation Coal Company, Buchanan Mine Bathhouse STP
   Drawer L
   Oakwood, Virginia 24631

   Facility Address/Location:
   Consolidation Coal Company, Buchanan Mine Bathhouse STP
   4086 Page Drive
   Oakwood, Virginia 24631

   Location: State Route 632, 4.8 miles Southeast of Oakwood, VA

2. Permit No. VA0066907 Existing Permit Expiration Date: *03/04/2012*

3. Owner/Permit/Facility Contact:
   Name: Gerald F. Ramsey
   Title: Manager of Permitting CAPP, CONSOL Energy, Inc.
   Telephone No: 276-498-8215
   Fax No: 276-498-8218
   Email: geraldramsey@consolenergy.com

4. Application Complete Date: September 8, 2011

   Permit Drafted By: Steve E. Artrip Steve E. Artrip Date: 9/5/2011
   Southwest Regional Office

   Reviewed By: Fred M. Wyatt Fred M. Wyatt Date: 9/5/11
   Southwest Regional Office

   Public Comment Period Dates: from _____ to _____

5. Receiving Stream Name: Garden Creek
   River Mile: GAR004.63
   Basin: Tennessee-Big Sandy River
   Subbasin: Big Sandy River
   Section: 3
   Class: IV
   Special Standards: None

The Buchanan Mine STP discharges to Garden Creek, near the headwaters in Buchanan County. Drought flow frequencies were calculated using data published by the USGS through year 2005 from a continuous record gage located on the Levisa Fork River, near Grundy Virginia (03207500), which has a drainage area of 235 mi^2. The values at the discharge point are determined by drainage area proportions.

Drought Flow Frequencies at discharge on Garden Creek, which has a drainage area of 6.93 mi^2.

7-Day, 10-Year Low Flow (7Q10):	0.026	MGD
1-Day, 10-Year Low Flow (1Q10):	0.019	MGD
30-Day, 5-Year Low Flow (30Q5):	0.103	MGD
30-Day, 10-Year Low Flow (30Q10):	0.058	MGD
7Q10 High Flow months, Dec-May:	0.181	MGD
1Q10 High Flow months, Dec-May:	0.123	MGD
30Q10 High Flow months, Dec-May:	0.498	MGD
Harmonic Mean Flow (HM):	0.44	MGD

Summer-Dry Season (June-November); Winter-Wet Season (December-May)

Tidal: No On 303(d) list? Yes

6. Operator License Requirements: None.

7. Reliability Class: - A Class III Reliability has been established for this facility and will be maintained in this permit.

8. Permit Characterization:
(X) Private ()Federal ()State ()POTW ()PVOTW

() Possible Interstate Effect () Interim Limits in Other Document

9. Provide a brief description of the wastewater treatment system.

OUTFALL NUMBER	DISCHARGE SOURCE (1)	TREATMENT (2)	FLOW (3)
001	Domestic Sewage Treatment Plant providing sanitary waste disposal for approximately 150 employees at the Buchanan Mine Bathhouse facility.	The treatment facilities consist of an extended aeration package sewage treatment plant with a bar screen, flow equalization tank, grinder pumps, aerated sludge holding tank, aeration tank, secondary clarifier, tablet chlorinator/ contact tank, tablet dechlorinator, post aeration tank and facilities.	The design flow of the sewage treatment works is 0.020 MGD.

10. Sewage Sludge Use or Disposal:
Sewage sludge will be removed from the compartments of the package plant as needed by SEPTIC, Inc, Rt. 2, Box 177, Haysi, VA 24256 (VA Department of Health Permit # 125-001). Once the sludge is removed from the plant it will be transported via a tank truck along State Route 632 North (Buchanan County) to Route 624 to Route 460 West to Route 83 South to the Town of Haysi Sewage Treatment Plant (VPDES Permit No. VA0067571). The liquid sludge will be incorporated into the Haysi treatment plant where additional stabilization will be provided prior to final disposal.

11. Discharge Location Description:
Name: Keen Mountain, VA Quadrangle
Map Number: 87-B
See Attachment No. 1 for a location map of the outfall.

12. Material Storage:
None reported.

13. Ambient Water Quality Information:
The DEQ conducts ambient water quality monitoring of Garden Creek at several locations. Garden Creek (Waterbody ID # VAS-Q04R) continues to be listed as impaired for bacteria/E.coli, aquatic life and chlorides. Current monitoring data indicates chlorides may be delisted in the 2010 Impaired Waters assessment report, due to removal of the effluent from a mining source. Sources of bacteria within the watershed are believed to result from sewer overflows, improper sewage disposal and large areas of the watershed that remain un-served by public sewer. The development of TMDL's for these impairments have been approved by EPA. See Item No. 26 for the wasteload allocations established in the approved TMDL's.

14. Antidegradation Review & Comments:
Tier I *(X)* Tier II _____ Tier III _____

The State Water Control Board's Water Quality Standards includes an antidegradation policy (9VAC25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained.

Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The antidegradation review begins with a Tier determination. *Garden Creek is determined to be a Tier I waterbody* since the existing limits are based on the water quality standards and given the impairments noted in Item 13 above.

15. Site Inspection: Date: 09/08/2010
Technical Inspection Performed by: Danny L. Petty, Environmental Inspector, DEQ-SWRO. No immediate problems were observed with the treatment works during the inspection.

16. Effluent Screening & Limitation Development:

a. Ammonia Nitrogen:

Effective on August 27, 2003 the State Water Control Board adopted new criteria for ammonia nitrogen (9 VAC 25-260-155). Generally, these newly adopted criteria are less restrictive than the previous ammonia criteria.

An acute ammonia nitrogen standard is now calculated without consideration of the stream temperature. The acute criteria are more restrictive if the trout species are present (*only Class V or VI waters*). The 1Q10 flow frequency value is used to calculate the steady state waste load allocations. A chronic ammonia nitrogen standard is now calculated by considering whether or not the early life stage of fish are present or absent and the pH and temperature of the stream. The 30Q10 flow frequency is also now used to calculate the steady state waste load allocations.

During permit issuance in 1997, permit limitations for ammonia nitrogen were evaluated. The evaluation concluded that an ammonia nitrogen limitation was not necessary to protect water quality in Garden Creek. Since the new water quality criteria for ammonia nitrogen are less restrictive than those used during the previous evaluation a new evaluation is not necessary. *See Attachment 2* for a copy of the previous evaluation conducted in year 1997.

b. BOD_5 – Biochemical Oxygen Demand

In March 1982 the VPDES permit for this facility included a dissolved oxygen minimum concentration of 6.2 mg/l and a BOD_5 monthly average concentration of 30 mg/l. The original model for Dissolved Oxygen/Biochemical Oxygen Demand cannot be located in the archived files. Using Best Professional Judgment regarding effluent and ambient stream quality the secondary treatment limits for BOD_5 (30 mg/l monthly average and 45 mg/l weekly average) and a Dissolved Oxygen minimum value of 6.2 mg/l are being retained in the reissuance permit.

c. Total Residual Chlorine/E.coli Bacterial Standards:

In order to bring chlorine into consistency with the standards for all other toxic materials, the old standard was revoked and chlorine was included in 9VAC24-260-140.B., which became effective on 12/10/97. Chlorine limitations were established during the 2002 permit renewal and will be retained in the reissued permit. *See Attachment No. 3 (2002 Chlorine Analysis).*

On January 15, 2003, new bacteria standards in the Water Quality Standards Section 9VAC25-260-170.A became effective, as did the revised disinfection policy of 9VAC25-260-170.B. These standards replaced the existing fecal coliform standard and disinfection policy of 9VAC25-160-170. In short, E.coli criteria replaced the existing fecal coliform criteria for freshwater.

In accordance with the agency guidance for the new criteria, permittees, which use chlorine, may perform a study to demonstrate that chlorine limits can be used as a surrogate for bacteria limits in a permit for an individual discharge. Twelve (12) data points are considered as the minimum acceptable data set. Demonstration that chlorine is an adequate surrogate is considered satisfied if there are no exceedences of the applicable criterion in the demonstration data set while the discharge is in compliance with the permitted chlorine limits at the facility. However, for major permits and minors with an EPA approved TMDL that has a wasteload allocation for bacteria for that facility, chlorine demonstrations are not allowed. Although chlorine residual is still considered the primary assurance of adequate disinfection, bacteria limits must be included in these permits. *Therefore, annual E.coli monitoring during the month of July, with a minimum of four weekly samples, is proposed for the term of the permit.* Water Quality Standards 9VAC25-260-170 allows for geometric means to be calculated using all data collected during any calendar month with a minimum of four weekly samples, collected at least 7 days apart between the hours of 10:00 a.m. and 4:00 p.m. E. coli bacteria shall not exceed a monthly geometric mean of 126 CFU/100 ml in freshwater.

d. pH:
pH concentrations are *6.0 S.U. minimum and 9.0 S.U. maximum* in accordance with the criteria provided in the Water Quality Standards 9VAC25-260, et seq.

e. Total Suspended Solids:
Total Suspended Solids concentrations are *30 mg/l monthly average and 45 mg/l weekly average* in accordance with the Federal Effluent Guidelines.

f. Reduced Monitoring:
EPA published "Interim Guidance For Performance-Based Reduction of NPDES Permit Frequencies" (EPA 833-B-96-001) in April 1996. Due to the exemplary operations of this sewage treatment works the facility continues to qualify for reduced monitoring. Chlorine is not considered for reduced monitoring due to the critical need for disinfection. Dissolved Oxygen is not considered due to mechanical post aeration requirements.

PARAMETER	EXISTING FREQUENCY	NORMAL FREQUENCY
BOD_5	1/3 Months	1/Month
TSS	1/3 Months	1/Month
pH	1/Week	1/Day

Provisions are contained in the permit to reinstate the more stringent monitoring frequencies should the facility be issued a Notice of Violation for any of the parameters listed below.

The reduced monitoring frequencies were arrived at by calculating the four-year composite average of the respective monitoring data and dividing it by the permit limit to determine the ratio of actual performance to the permit limit. The monitoring frequency for pH qualifies for reduced since no treatment is used to achieve the permit limit. The range of pH values during the past 4 years was 6.2 S.U. to 8.5 S.U. A summary of these data are listed below:

PARAMETER	4 YEAR AVERAGE	Performance to Limit Ratio Percentage
BOD_5	10.3 mg/l	34%
TSS	14.2 mg/l	41%

g. Basis for Effluent Limitations:

PARAMETER	(a) BASIS FOR LIMITS	DISCHARGE LIMITS(b) Final Limitations Effective From: March 05,2012 - To March 04, 2017				MONITORING REQUIREMENTS	
		MONTHLY AVERAGE	WEEKLY AVERAGE	MIN	MAX	FREQUENCY	SAMPLE TYPE
Flow	NA	NL	NA	NA	NL	1/Day	(c) Estimate
pH (SU)	3	NA	NA	6.0 S.U.	9.0 S.U.	1/Week	Grab
BOD_5	2,5	30 mg/l 2.3 kg/d	45 mg/l 3.4 kg/d	NA	NA	1/3 Months	Grab
Total Suspended Solids	1	30 mg/l 2.3 kg/d	45 mg/l 3.4 kg/d	NA	NA	1/3 Months	Grab
Dissolved Oxygen	3,5	NA	NA	6.2 mg/l	NA	1/Day	Grab
(d) Total Residual Chlorine	3,4	0.012 mg/l	0.015 mg/l	NA	NA	1/Day	Grab
(e) E. Coli	3	126 N/100 ml	NA	NA	NA	(f) 1/Week	Grab

a. 1. Federal Effluent guidelines
2. Best Engineering Judgment:
3. Water Quality standard
4. Other (e.g. wasteload allocation model)
5. Best Professional Judgment

b. Express limits in units of concentration (mg/l) and/or mass (kg/d).

c. Estimated average daily flowrate shall be based on the most accurate method or device available such as: weir, potable water meter, pump rates, etc.

d. ADDITIONAL INSTRUCTIONS AND MONITORING REQUIREMENTS FOR TRC
See Items 1-5 below.

1. The permittee shall monitor TRC at the outlet of the chlorine contact tank, *once per day* by *grab sample.*

2. No more than (**3**) samples of all samples taken at the outlet of the chlorine contact tank shall be less than *1.0 mg/l* for any one calendar month [DMR code # 157].

3. No TRC sample collected at the outlet of the chlorine contact tank shall be less than *0.60 mg/*l [DMR code # 213].

4. If dechlorination facilities exist the samples above shall be collected prior to dechlorination.

5. If chlorine is not used, bacteria shall be limited and monitored by the permittee as specified below:

	Discharge Limitations		Monitoring Requirements	
	Monthly Avg.	Weekly Avg.	Frequency	Sample Type
E.coli (N/100ml)	126*	NA	1/Week**	Grab

* Geometric Mean; ** Between 10:00 a.m. and 4:00 p.m.

e. Samples for E. coli are to be collected between the hours of 10:00 a.m. and 4:00 p.m.

f. Four E. coli samples are to be collected in the month of July for each year of the permit. Samples should be taken at least seven days apart within the calendar month of July. The results are to be calculated and reported as a Geometric Mean.

17. Basis for Sludge Use & Disposal:
VPDES Permit Regulation, 9VAC25-31-100 P; 220 B 2; and 420 through 720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on sludge use and disposal practices and to meet specified standards for sludge use and disposal.

18. Antibacksliding Statement:
Compliance with antibacksliding provisions of the Permit Regulation (9VAC25-31-220.1) have been achieved since no less stringent limitations are contained in this permit.

19. Compliance Schedules: No schedules of compliance are included in this permit.

20. Special Conditions:

PART I.B. Additional TRC Limitations and Monitoring Requirements:

Rationale: Required by Sewage Collection and Treatment Regulations, 9VAC25-790. Also, 40 CFR 122.41(e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment in order to comply with the permit. This ensures proper operation of chlorination equipment to maintain adequate disinfection.

Part I. C. Compliance Reporting Under part I. A.:

Rationale: Authorized by VPDES Permit Regulation, 9VAC25-31-190 J 4 and 220 I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.

Part I. D. Other Requirements and Special Conditions:

a. Treatment Plant Flows - 95% Capacity Reopener:
Rationale: Required by VPDES Permit Regulation, 9VAC25-31-200 B 4 for all POTW and PVOTW permits. (Part I.D.1)

b. Indirect Dischargers:
Rationale: Required by VPDES Permit Regulation, 9VAC25-31-200 B 1 and B 2 for POTWs and PVOTWs that receive waste from someone other than the owner of the treatment works. (Part I.D.2)

c. O&M Manual Requirement:
Required by Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9VAC25-790; VPDES Permit Regulation, 9VAC25-31-190 E. (Part I.D.3)

d. Reliability Class:
Rationale: Required by Sewage Collection and Treatment Regulations, 9VAC25-790 for all municipal facilities. (Part I.D.4)

e. CTC, CTO Requirement:
Rationale: Required by Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9VAC25-790. (Part I.D.5)

f. Treatment Works Closure Plan:
Rationale: State Water Control Law § 62.1-44.19. This condition is used to notify the owner of the need for a closure plan where a treatment works is being replaced or is expected to close. (Part I.D.6)

g. Sludge Use and Disposal:
Rationale: VPDES Permit Regulation, 9VAC25-31-100 P; 220 B 2; and 420 through 720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on sludge use and disposal practices and to meet specified standards for sludge use and disposal. (Part I.D.7)

h. Sludge Reopener:
Rationale: Required by VPDES Permit Regulation, 9VAC25-31-220 C for all permits issued to treatment works treating domestic sewage. (Part I.D.8)

i. Public Sewerage Service:
Rationale: DEQ strategy to minimize individual discharges and promote regionalization of wastewater treatment. The permit shall be terminated when public sewerage service is made available. (Part I.D.9)

j. Total Maximum Daily Load (TMDL)
Rationale: Section 303(d) of the Clean Water Act requires that total maximum daily loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The re-opener recognizes that, according to section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act. (Part I.D.10)

k. Effluent Monitoring Frequency:
Rationale: Permittees are granted a reduction in monitoring frequency based on a history of permit compliance. To remain eligible for the reduction, the permittee should not have violations related to the effluent limits for which reduced frequencies were granted. If permittees fail to maintain the previous level of performance, the baseline monitoring frequencies should be reinstated for those parameters that were previously granted a monitoring frequency reduction. (Part I.D.11)

1. Part II, Conditions Applicable to All Permits:
Rationale: VPDES Permit Regulation, 9VAC25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed. (Part II)

21. Changes to Permit:

E. coli monitoring at a frequency of once per week during the month of July each year is now required.

A Total Maximum Daily Load re-opener has been added as a special condition should it become necessary to modify the permit during the development of TMDL's on Garden Creek.

All special conditions (95% Flow, Indirect Dischargers, O & M Manual, Reliability Classification, CTC, CTO, Closure Plan, Sludge Use and Disposal, Sludge Reopener and TMDL) are in accordance with the guidance provided in the December 2010 permit manual that is updated on a continual basis. Part II, Conditions applicable to all VPDES permits is in accordance with 9VAC25-31-10 et seq., amended June 6, 2006, effective September 6, 2006, updated August 25, 2011. Parts I, II. and III of the revised Virginia Draft Permit Submission Checklist is included as an addendum to this Fact Sheet. (*See Attachment No. 4*)

22. Variances/Alternate Limits or Conditions:
On Part A.12 of EPA Form 2A, waivers were requested for the collection temperature and fecal coliform and for the collection of composite samples. These waivers are granted as these parameters are not required in the current permit and are not necessary to develop permit limits.

23. Regulation of Users: 9VAC25-31-280 B 9:
There are no industrial users contributing to the treatment works.

24. Public Notice Information required by 9VAC25-31-280 B:

All pertinent information is on file and may be inspected and copied by contacting *Steve E. Artrip* at: Department of Environmental Quality (DEQ), Southwest Regional Office, 355 Deadmore Street, P.O. Box 1688, Abingdon, Virginia 24212. Telephone: 276-676-4808, E-mail: steve.artrip@deq.virginia.gov.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may review the draft permit and application at the DEQ the Southwest Regional Office by appointment.

25. Additional Comments:

a. Previous Board Action:
None.

b. Staff Comments:
Threatened and Endangered Species Coordination with DCR is required per email from Ellenore M. Daub, Office of Water Permit and Compliance Assistance, March 07, 2011. The information necessary was submitted to DCR on September 9, 2011.

Comments were received from DCR by letter dated October 3, 2011. DCR's Biotics Data System indicates that the Powell River crayfish *Cambarus jezerinaci* has been historically documented downstream in Garden Creek. Threats to the Powell River crayfish include degradation of water quality due to deforestation and mining activities which may increase sediments, water temperatures or pollutant loads. DCR recommendations to minimize adverse impacts to the aquatic ecosystem include implementation of erosion and sediment control measures during all land disturbing activities and the use of ultraviolet/ozone to replace chlorination as the disinfection method. These recommendations should be considered during the expansion or upgrade of the treatment facilities.

c. Additional Comments:
None.

d. Public Comment:

26. 303(d) Listed Segments (TMDL):

This facility discharges directly to Garden Creek. Garden Creek is listed as impaired on the current 303 (d) list for bacteria/E. Coli, Chloride/Total Dissolved Solids and benthic impairment due to sedimentation. Each TMDL is listed below with the EPA approval date and the respective wasteload allocation that was established for the Buchanan Mine STP discharge. The current VPDES permit has limits for Total Suspended Solids of 30 mg/l monthly average and 45 mg/l weekly average. Discharge Monitoring data indicate compliance with these limitations for Total Suspended Solids during the term of the permit. The approved TMDL's establish wasteload allocations for Chloride and Total Dissolved Solids; no reductions in the loadings for these parameters are required. The facility provides chlorination and dechlorination to achieve adequate disinfection. These parameters are in compliance with the approved TMDL's and E. coli monitoring has been added to the permit.

- *Chloride and Total Dissolved Solids*: EPA approved the TMDL on 11/4/2007. The average annual Chloride and TDS loading (kg/year) modeled in the Garden Creek watershed at the outlet for the Buchanan Mine STP is listed below.

Wasteload Allocation VA0066907	Existing Chloride (kg/yr)	Allocated Chloride (kg/yr)	Chloride Reductions (%)
	830	*830*	*0.00%*

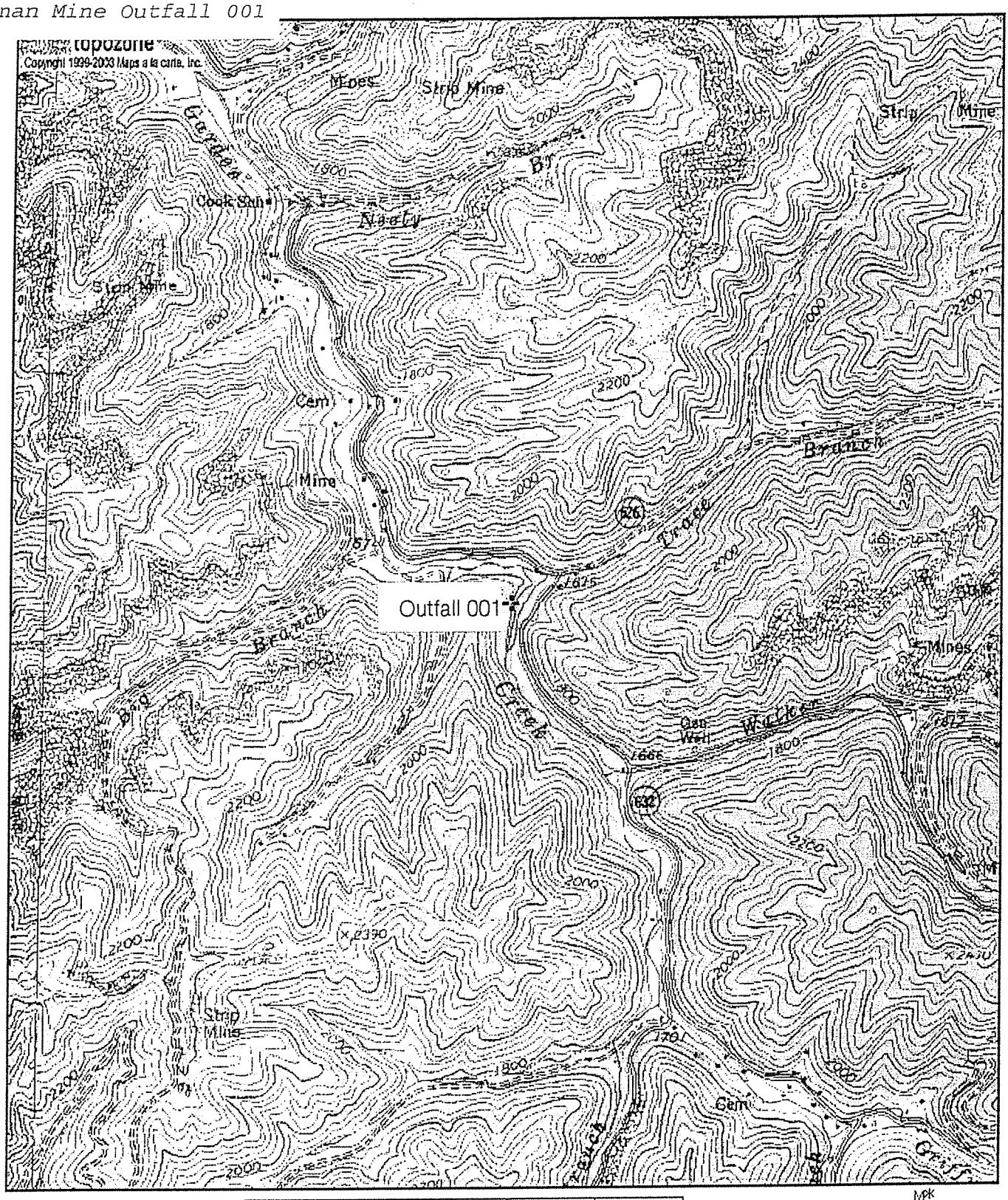
Wasteload Allocation VA0066907	Existing TDS (kg/yr)	Allocated TDS (kg/yr)	TDS Reductions (%)
	7,470	*7,470*	*0.00%*

- *E.coli/Bacteria*: EPA approved the TMDL on 08/10/2007 and the State Water Control Board approved the TMDL on 07/31/2008. The average annual E. coli loading (cfu/year) modeled in the Garden Creek watershed at the outlet for the Buchanan Mine STP is listed below:

Wasteload Allocation VA0066907	E. coli (cfu/year)
	3.48E+10

- *Benthic/Sediment*: EPA approved the TMDL on 03/18/2011. The average annual TSS loading (tons/year) modeled in the Garden Creek watershed at the outlet for the Buchanan Mine STP is listed below:

Wasteload Allocation VA0066907	Sediment (tons/year)
	0.83



37° 09' 35"N, 81° 58' 55"W (NAD83/WGS84)

Trace Branch, USGS Keen Mountain (VA) Quadrangle

Projection is UTM Zone 17 NAD83 Datum

M=-6.7
G=-0.593

Calculation of Ammonia Nitrogen (NH_3-N) Limits

Attachment No. 2 1997 Analysis

Facility Name: Consolidation Coal Co., Buchanan Mine STP
VPDES Permit No: VA0066907

BACKGROUND:

When this permit was reissued (Jan. 1992), the permittee was required to monitor pH and temperature in the receiving stream, upstream of the STP discharge. These data will be used to establish ammonia nitrogen water quality standards for the receiving stream. Additionally, the permittee was required to monitor the ammonia concentration in the effluent. These data will be statistically evaluated to determine the appropriate ammonia nitrogen limitation for the discharge.

The permittee, in letter dated August 30, 1996, has requested that only ammonia nitrogen data from December 1995 to the present be used for evaluation of permit limitations. Justification for this request is based on the fact that the early analyses (Jan. 1992 - Nov. 1995) may not have been conducted in accordance with approved methodologies. The permittee has also demonstrated that the most recent ammonia data are more consistent with the type of treatment provided and the expected characteristics of the wastewater. Therefore, this request is being honored.

STANDARDS:

NH_3-N limits must be the more restrictive of either the acute or chronic values, which are derived from the calculation of the formulas in the Water Quality Standards. See pages 6-9 of this attachment for details of the calculations. Human Health standards are not applicable for ammonia.

90th percentile pH and temperature values were established from data collected by the permittee on Garden Creek from September 1993 through June 1996. A summary of these data are listed below. For details of these data see page 5 of this attachment.

Summer pH = 8.69 Summer Temperature = 17.6 °C

Winter pH = 8.73 Winter Temperature = 14.8 °C

The calculated ammonia nitrogen water quality standards (WQS) are:

Acute Dry Season Std.	Acute Wet Season Std.	Chronic Dry Season Std.	Chronic Wet Season Std.
1.29 mg/l	1.18 mg/l	0.29 mg/l	0.27 mg/l

Attachment No. 2
page 2
Calculation of Ammonia Nitrogen (NH_3-N) Limits

MIXING ANALYSIS

Effluent flow = 0.02 MGD

Stream 7Q10 flow = 0.011 MGD

Stream 1Q10 flow = 0.008 MGD

Width = 5 ft

Slope (ft/ft) = 0.010

Bottom scale = 2

Channel has normal irregularities

C H R O N I C R E S U L T S

7Q10 depth = 0.04 ft

7Q10 velocity = 0.22 ft/sec = 3.7 mi / day

Mixing length @ 7Q10 = 450 ft = Residence time = 0.023 days

COMPLETE MIX MAY BE USED FOR THE CHRONIC WLA

Percent of 7Q10 to be used for WLAc = 100%

A C U T E R E S U L T S

1Q10 depth = 0.04 ft

1Q10 velocity = 0.22 ft/sec = 3.5 mi / day

Mixing length @ 1Q10 = 474 ft = Residence time = 0.609 hours

COMPLETE MIX MAY BE USED FOR THE ACUTE WLA

Percent of 1Q10 to be used for WLAa = 100%

Calculation of Ammonia Nitrogen (NH_3-N) Limits (continued)

Assuming a background NH_3-N concentration of 0, the wasteload allocations are calculated using the following mass balance equations.

$$WLA_{acute\ summer\ dry} = CO_s\text{-Acute}\ (Q_{s\text{-}1} + Q_e)/Q_e$$

$$WLA_{acute\ summer\ dry} = 1.29\ (0.008 + 0.02)/\ 0.02$$

$$WLA_{acute\ summer} = \underline{1.81\ mg/l}$$

$$WLA_{acute\ winter\ wet} = Co_w\text{-Acute}\ (Q_{s\text{-}1} + Q_e)/Q_e$$

$$WLA_{acute\ winter\ wet} = 1.18\ (0.061 + 0.02)/\ 0.02$$

$$WLA_{acute\ winter} = \underline{4.78\ mg/l}$$

$$WLA_{chronic\ summer\ dry} = Co_s\text{-Chronic}\ (Q_{s\text{-}7} + Q_e)/Q_e$$

$$WLA_{chronic\ summer\ dry} = 0.29\ (0.011 + 0.02)/\ 0.02$$

$$WLA_{chronic\ summer} = \underline{0.45\ mg/l}$$

$$WLA_{chronic\ winter\ wet} = Co_w\text{-Chronic}\ (Q_{s\text{-}7} + Q_e)/Q_e$$

$$WLA_{chronic\ winter\ wet} = 0.27\ (0.094 + 0.02)/\ 0.02$$

$$WLA_{chronic\ winter} = \underline{1.54\ mg/l}$$

PERMIT LIMITS

The WLA's (chronic and acute) and effluent data collected by the permittee from December 1995 through September 1996 were entered into the QWPS's WLA computer program. NO PERMIT LIMIT IS REQUIRED for the summer or winter tier. The output statistics may be found on page 4 of this attachment.

ANTIBACKSLIDING

No permit limitation for ammonia nitrogen has ever been in effect for this permit. Therefore, antibacksliding is not an issue.

Calculation of Ammonia Nitrogen (NH_3-N) Limits (continued)

Analysis of the Consolidation Coal Co., Buchanan Mine STP (Summer Tier June-November) effluent data for Ammonia

The statistics for Ammonia are:

Number of values	= 4
Quantification level	= .2
Number < quantification	= 3
Expected value	= .1604594
Variance	= 9.268994E-03
C.V.	= .6
97th percentile	= .3904646
Statistics used	= Reasonable potential assumptions - Type 1 data

The WLAs for Ammonia are:

Acute WLA	= 1.81
Chronic WLA	= 0.45
Human Health WLA	= NA

The limits are based on chronic toxicity and 1 samples/month.

NO LIMIT NEEDED FOR Ammonia

DATA
0.1
0.6
<0.2
0.1

Analysis of the Consolidation Coal Co., Buchanan Mine STP (Winter Tier December-May) effluent data for Ammonia

The statistics for Ammonia are:

Number of values	= 6
Quantification level	= .2
Number < quantification	= 4
Expected value	= .1855498
Variance	= 1.239434E-02
C.V.	= .6
97th percentile	= .45152
Statistics used	= Reasonable potential assumptions - Type 1 data

The WLAs for Ammonia are:

Acute WLA	= 4.78
Chronic WLA	= 1.54
Human Health WLA	= NA

The limits are based on chronic toxicity and 1 samples/month.

NO LIMIT NEEDED FOR Ammonia

DATA	
0.25	0.07
<0.1	1.3
<0.1	
<0.1	

Buchanan Mine STP-VA0066907

Data Collected by permittee Sept. 1993 through June 1996 upstream of the STP Discharge on Garden Creek

Dry Season - June through November

Rank	pH S.U.	Temperature °C	
16	9.91	20.10	
15	8.83	18.10	
14	8.69	*17.60	90th Percentile
13	8.63	17.60	
12	8.63	17.40	
11	8.63	17.20	
10	8.52	16.60	
9	8.46	16.20	
8	8.46	15.40	
7	8.36	14.90	
6	8.26	14.90	
5	8.21	14.00	
4	8.16	12.30	
3	8.16	10.40	
2	8.16	9.30	
1	7.80	7.90	
	14.40	14.40	90th

Wet Season - December through May

Rank	pH S.U.	Temperature°C	
18	8.76	15.90	
17	8.76	15.80	
16	8.73	14.80	90th percentile
15	8.73	14.60	
14	8.68	14.00	
13	8.65	12.30	
12	8.57	12.00	
11	8.56	11.80	
10	8.54	11.20	
9	8.37	10.80	
8	8.36	10.00	
7	8.24	9.70	
6	8.21	8.60	
5	8.20	7.50	
4	8.02	6.70	
3	8.00	6.60	
2	7.97	4.30	
1	7.91	3.70	
	16.20	16.20	90th

*The 90th percentile temperature of 17.6 °C seems to be very low based on the comparison of other temperature data for similar streams. Therefore, a value of 24.99 °C was used to see if a final permit limitation would be needed. The wasteload allocations for the dry season (June - November) changed sightly resulting in an acute WLA of 1.93 mg/l and a chronic WLA of 0.34 mg/l. The values were also entered into OWPS WLA model and the output statistics still indicate that No Permit Limit is needed for ammonia. The results of these calculations may be found on page 10 of this attachment. However, since the output indicates the same results, No Permit Limit is needed for ammonia, the original temperature data collected and submitted by the permittee will be assumed to be representative of the stream conditions on Garden Creek.

FORMULAS USED IN THE CALCULATION OF
ACUTE CRITERIA VALUES FOR AMMONIA IN FRESHWATER

[The one hour average concentration of ammonia (in mg/L as un-ionized NH3) calc. as follows].

B.- ACUTE AMMONIA STANDARD FOR WARMWATER HABITATS - TROUT/ OTHER SENSITIVE COLDWATER SPECIES ABSENT

ENTER STREAM TEMPERATURE 17.60 °C

ENTER STREAM pH 8.69 S.U.

FORMULA: ACUTE (un-ionized) AMMONIA CRITERIA= 0.52/ FT/ FpH/ 2

ACUTE un-ionized AMMONIA CRITERIA = 0.22

where: 1) FT = Final Temperature $= 10^{0.03(20 - TCAP)}$; $TCAP < T < 30\ ^{o}C$

$TCAP = 25\ ^{o}C$ since trout, coldwater species absent

or $= 10^{0.03(20 - T)}$; $0 < T < TCAP$

FT = 1.18

2) FpH = Final pH = 1 ; if $8.0 < pH < 9.0$

or = $(1 + 10^{7.4 - pH})/1.25$; if $6.5 < pH < 8.0$

FpH = 1.00

3) Fraction of un-ionized Ammonia = $1/(10^{pka - pH} + 1)$

pka = $0.09018 + (2729.92/(273.2 + \text{Temperature } ^{o}C))$

pka = 9.48

Fraction of un-ionized Ammonia = 0.14

4) Total Ammonia Criteria = Calc. Un-ionized Criteria/ Fraction of Un-ionized NH3

Total Ammonia Criteria = 1.57

5) NH3-N Criteria Value = 1.57 X .822 = 1.29 mg/L Acute Dry Season Std.

FORMULAS USED IN THE CALCULATION OF
ACUTE CRITERIA VALUES FOR AMMONIA IN FRESHWATER

[The one hour average concentration of ammonia (in mg/L as un-ionized NH3) calc. as follows].

B.- ACUTE AMMONIA STANDARD FOR WARMWATER HABITATS - TROUT/ OTHER SENSITIVE COLDWATER SPECIES ABSENT

ENTER STREAM TEMPERATURE 14.80 °C

ENTER STREAM pH 8.73 S.U.

FORMULA: ACUTE (un-ionized) AMMONIA CRITERIA = 0.52/ FT/ FpH/ 2

ACUTE un-ionized AMMONIA CRITERIA = 0.18

where: 1) FT = Final Temperature $= 10^{0.03(20 - TCAP)}$; $TCAP < T < 30\ ^{o}C$

$TCAP = 25\ ^{o}C$ since trout, coldwater species absent

or $= 10^{0.03(20 - T)}$; $0 < T < TCAP$

FT = 1.43

2) FpH = Final pH = 1 ; if $8.0 < pH < 9.0$

or = $(1 + 10^{7.4 - pH})/1.25$; if $6.5 < pH < 8.0$

FpH = 1.00

3) Fraction of un-ionized Ammonia = $1/(10^{pka - pH} + 1)$

pka = $0.09018 + (2729.92/(273.2 + \text{Temperature } ^{o}C))$

pka = 9.57

Fraction of un-ionized Ammonia = 0.13

4) Total Ammonia Criteria = Calc. Un-ionized Criteria/ Fraction of Un-ionized NH3

Total Ammonia Criteria = 1.43

5) NH3-N Criteria Value = 1.43 X .822 = 1.18 mg/L Acute Wet Season Std.

FORMULAS USED IN THE CALCULATION OF
CHRONIC CRITERIA VALUES FOR AMMONIA IN FRESHWATER

[The 4-DAY average concentration of ammonia (in mg/L as un-ionized NH3) calc. as follows].

D.- CHRONIC AMMONIA STANDARD FOR WARMWATER HABITATS - TROUT/ OTHER SENSITIVE COLDWATER SPECIES ABSENT

ENTER STREAM TEMPERATURE 17.60 ^{o}C

ENTER STREAM pH 8.69 S.U.

FORMULA: CHRONIC (un-ionized) NH3 CRITERIA= 0.80/ FT/ FpH/ RATIO

CHRONIC un-ionized AMMONIA CRITERIA= 0.05

$= 10^{0.03(20 - TCAP)}$; TCAP < T < 30 ^{o}C

where: 1) FT = Final Temperature

TCAP = 20 ^{o}C since trout, coldwater species absent

or = $10^{0.03(20 - T)}$; 0 < T < TCAP

FT = 1.18

2) FpH = Final pH =

1 ; if 8.0 < pH < 9.0

or = $(1 + 10^{7.4 - pH})/1.25$; if 6.5 < pH < 8.0

FpH = 1.00

3) RATIO = 13.5 ; if 7.7 < pH < 9.0

or RATIO = $20.25 \times (10^{7.7 - pH})/(1 + 10^{7.4 - pH})$; if 6.5< pH < 7.7

RATIO = 13.50

4) Fraction of un-ionized Ammonia = $1/(10^{pka - pH} + 1)$

pka = 0.09018 + (2729.92/(273.2 + Temperature ^{o}C))

pka = 9.48

Fraction of un-ionized Ammonia = 0.14

5) Total Ammonia Criteria = Calc. Un-ionized Criteria/ Fraction of Un-ionized NH3

Total Ammonia Criteria = 0.36

6) NH3-N Criteria Value = 0.36 X .822 = 0.29 mg/L Chronic Dry Season Std.

FORMULAS USED IN THE CALCULATION OF
CHRONIC CRITERIA VALUES FOR AMMONIA IN FRESHWATER

[The 4-DAY average concentration of ammonia (in mg/L as un-ionized NH3) calc. as follows].

D.- CHRONIC AMMONIA STANDARD FOR WARMWATER HABITATS - TROUT/ OTHER SENSITIVE COLDWATER SPECIES ABSENT

ENTER STREAM TEMPERATURE 14.80 °C

ENTER STREAM pH 8.73 S.U.

FORMULA: CHRONIC (un-ionized) NH3 CRITERIA = 0.80/ FT/ FpH/ RATIO

CHRONIC un-ionized AMMONIA CRITERIA = 0.04

where: 1) FT = Final Temperature

$$= 10^{0.03(20 - TCAP)} \quad ; TCAP < T < 30\ ^{o}C$$

TCAP = 20 °C since trout, coldwater species absent

$$\text{or} = 10^{0.03(20 - T)} \quad ; 0 < T < TCAP$$

FT = 1.43

2) FpH = Final pH =

$$1 \ ; \text{ if } 8.0 < pH < 9.0$$

$$\text{or} = (1 + 10^{7.4 - pH})/1.25 \ ; \text{ if } 6.5 < pH < 8.0$$

FpH = 1.00

3) RATIO = 13.5 ; if 7.7 < pH < 9.0

$$\text{or RATIO} = 20.25 \times (10^{7.7 - pH})/(1 + 10^{7.4 - pH}) \ ; \text{ if } 6.5 < pH < 7.7$$

RATIO = 13.50

4) Fraction of un-ionized Ammonia = $1/(10^{pka - pH} + 1)$

pka = 0.09018 + (2729.92/(273.2 + Temperature °C))

pka = 9.57

Fraction of un-ionized Ammonia = 0.13

5) Total Ammonia Criteria = Calc. Un-ionized Criteria/ Fraction of Un-ionized NH3

Total Ammonia Criteria = 0.33

6) NH3-N Criteria Value = 0.33 X .822 = 0.27 mg/L Chronic Wet Season Std.

Calculation of Ammonia Nitrogen (NH_3-N) Limits (continued)

Analysis of the Consolidation Coal Co., Buchanan Mine STP (Summer Tier June-November) effluent data for Ammonia using Temperature value of 24.99 °C as the basis for the determination of water quality standard and resulting WLA.

The statistics for Ammonia are:

Number of values	=	4
Quantification level	=	.2
Number < quantification	=	3
Expected value	=	.1604594
Variance	=	9.268994E-03
C.V.	=	.6
97th percentile	=	.3904646
Statistics used	=	Reasonable potential assumptions - Type 1 data

The WLAs for Ammonia are:

Acute WLA	=	1.93
Chronic WLA	=	0.34
Human Health WLA	=	NA

The limits are based on chronic toxicity and 1 samples/month.

NO LIMIT NEEDED FOR Ammonia

DATA
0.1
0.6
<0.2
0.1

Attachment No. 3 (2002 Analysis)

Chlorine

Facility Name: Consolidation Coal Company, Buchanan Mine STP
VPDES Permit No: VA0066907

BACKGROUND:

In order to bring chlorine into consistency with the standards for all other toxic materials, the old standard was revoked and chlorine was included in 9VAC24-260-140.B., which became effective on 12/10/97.

STANDARDS:

Acute Standard = *19 µg/l*
Chronic Standard = *11 µg/l*

MIXING ZONE ANALYSIS:

MIXING ANALYSIS FOR Consolidation Coal Company, Buchanan Mine STP

Effluent flow	=	0.02 MGD
Stream 7Q10 flow	=	0.011 MGD
Stream 1Q10 flow	=	0.008 MGD
Width	=	5ft
Slope (ft/ft)	=	0.010
Bottom scale	=	2
Channel scale	=	1

Mixing Zone Predictions @ 7Q10

Depth =	0.0426 ft
Length =	450.14 ft
Velocity =	0.2249 ft/sec
Residence Time =	0.0232 days

Recommendation: A complete mix assumption is appropriate for this situation and the entire 7Q10 may be used.

Mixing Zone Predictions @ 1Q10

Depth =	0.0401 ft
Length =	473.51 ft
Velocity =	0.216 ft/sec
Residence Time =	0.6089 hours

Recommendation: A complete mix assumption is appropriate for this situation and the entire 1Q10 may be used.

WASTELOAD ALLOCATIONS:

The Mixing Zone Analysis (above) indicates that it is appropriate to use 100% of the Acute and Chronic drought flow frequencies in determining the wasteload allocation for chlorine. Assuming a background chlorine concentration of 0 mg/l, the wasteload allocations are calculated below.

WLA_{acute} = CO_s-Acute (Q_{s-1} + Q_e) - Q_{s-1} (background) / Q_e

WLA_{acute} = 19 (0.008 + 0.020) - 0.008 (0) / 0.020

WLA_{acute} = 26.6 µg/l or 0.027 mg/l

$WLA_{chronic}$ = CO_s-Chronic (Q_{s-7} + Q_e) - Q_{s-7} (background) / Q_e

$WLA_{chronic}$ = 11 (0.011 + 0.020) - 0.011 (0) / 0.020

$WLA_{chronic}$ = 17.05 µg/l or 0.017 mg/l

Where:

CO_s-Acute	= 19	µg/l	(Acute Std.)
CO_s-Chronic	= 11	µg/l	(Chronic Std.)
Q_{s-1}	= 0.008	MGD	(1Q10 flow)
Q_{s-7}	= 0.011	MGD	(7Q10 flow)
Q_e	= 0.020	MGD	(Effluent flow)

PERMIT LIMITS:

The acute wasteload allocation and a single datum value of 5.0 mg/l were entered into the current version (2.0.3) of the WLA program. The results indicate an average weekly limit of *0.015 mg/l* and a monthly average limit of *0.012 mg/l*. The results of WLA 2.0.3 are attached below.

Facility = Consolidation Coal Company, Buchanan Mine
Chemical = Chlorine
Chronic averaging period = 4
WLAa = 26.6
WLAc = 17.05
Q.L. = 0.1
# samples/mo. = 30
# samples/wk. = 7

Summary of Statistics:
observations = 1
Expected Value = 5000
Variance = 9000000
C.V. = 0.6
97th percentile daily values = 12167.0
97th percentile 4 day average = 8318.95
97th percentile 30 day average= 6030.26
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on *Chronic Toxicity*
Average Weekly limit = 14.8749877172616 µg/l or *0.015 mg/l*
Average Monthly limit = 12.3592554350075 µg/l or *0.012 mg/l*

The data are: 5000 µg/l or 5 mg/l

Additional TRC Limitations and Monitoring Requirements to ensure proper disinfection of the wastewater.

1. The permittee shall monitor TRC at the outlet of the chlorine contact tank, prior to dechlorination, *once per day* by *grab sample.*

2. No more than (*3*) samples of all samples shall be less than *1.0 mg/l* for any one calendar month [DMR code # 157].

3. No TRC sample shall be less than *0.60 mg/*l [DMR code # 213].

4. *If dechlorination facilities exist the samples above shall be collected prior to dechlorination.*

Revised 2/2003 Attachment No 4

State "Transmittal Checklist" to Assist in Targeting Municipal and Industrial Individual NPDES Draft Permits for Review

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name: Buchanan Mine Mine STP

NPDES Permit Number: VA0066907

Permit Writer Name: Steve E. Artrip

Date: 09/8/2011

Major [ ] **Minor** [X] **Industrial** [ ] **Municipal** [X]

I.A. Draft Permit Package Submittal Includes:	Yes	No	N/A
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit– entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?		**X**	
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?			X
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?		X	
8. Whole Effluent Toxicity Test summary and analysis?			X
9. Permit Rating Sheet for new or modified industrial facilities?			X

I.B. Permit/Facility Characteristics	Yes	No	N/A
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet **or** permit contain a description of the wastewater treatment process?	X		

I.B. Permit/Facility Characteristics– cont.	Yes	No	N/A
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet **or** permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?	X		
a. Has a TMDL been developed and approved by EPA for the impaired water?	X		
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?			X
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?	X		
9. Have any limits been removed, **or** are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?		X	
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?		X	
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?	X		

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Review Checklist – For Non-Municipals

(To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet **or** permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?	X		

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?		X	
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?			X
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?			X
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	X		
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?			X
5. Does the permit contain "tiered" limits that reflect projected increases in production or flow?		X	
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			X
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	X		

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)– cont.	Yes	No	N/A
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?	X		
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?		X	
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	X		
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?	X		
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?	X		
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?	X		
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?	X		
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	X		

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			X
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State's standard practices?		X	

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?		X	
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?			X
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		

List of Standard Conditions – 40 CFR 122.41

Duty to comply
Duty to reapply
Need to halt or reduce activity not a defense
Duty to mitigate
Proper O & M
Permit actions
Property rights
Duty to provide information
Inspections and entry
Monitoring and records
Signatory requirement
Bypass
Upset
Reporting Requirements
Planned change
Anticipated noncompliance
Transfers
Monitoring reports
Compliance schedules
24-Hour reporting
Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?	X		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist isaccurate and complete, to the best of my knowledge.

Name	Steve E. Artrip
Title	Environmental Engineer Senior
Signature	Steve E. Artrip
Date	09/8/2011